

MEMO ROUTING SLIP

TO THE FOLLOWING IN ORDER INDICATED

NAME OR TITLE		INITIALS—DATE
1. Dr. Wetmore		
2.		
3.		
4.		
Your information	<input type="checkbox"/>	Note and return <input type="checkbox"/>
Your comments	<input type="checkbox"/>	Proper signature <input type="checkbox"/>
Necessary action	<input type="checkbox"/>	Note and file <input type="checkbox"/>
Prepare reply	<input type="checkbox"/>	See me <input type="checkbox"/>
Your recommendation	<input type="checkbox"/>	Your initials <input type="checkbox"/>

REMARKS Tom Howell gave a xeroxed copy of the original field notes to Phil Humphrey for us to copy for our information and our files. I thought you'd like to have a copy so here it is! I haven't had time to read through it yet to see if there are any glaring errors (it was extremely difficult to read the original).

FROM	DATE
Jane P. Church	10-15-69
	PHONE
	5396

Journal of Donald R. Dickey.
Laysan Mail #8

Saturday 3-24-23 Bright Sun, thin fog in eve.

Pasadena to Santa Barbara Channel en route to Laysan Id.

Sailed from Wilmington at high noon on the "City of Los Angeles" ("Aeolus", during the war - before that the Hamburg -American "Grosser Kurfurst"). She has been rented (?) from the U.S.S.B. by the L.A. S.S. Co., this being the first run under entirely private auspices. Apparently an unusually steady second-rate Atlantic liner about 580' over all and of about 23,000 gross tons. Captain Paulsen commanding.

We have a fine roomy outside cabin on starboard side of "D" deck, amid ships #327 with deck chairs forward on the port side of "B" deck. The Shipping Board decked over the aft = well on "B" deck making an ideal passengers! "shuffle-board parlor", but an expensive hoist for freight.

A stodgy passenger list of only 85 (instead of the 375 she can handle) but luckily no Jews!

In late afternoon hours after we had left Santa Barbara Id. astern on the port side with San Nicholas as a mere speck beyond it I was interested in noting a group of several pelicans resting out in the open sea 20 m. or so from any land. I had thought of them as fishing inside the islands instead of out in this choppy wind-track -- probably from the Anacapa colony. 100 or so Western Gulls still following and at dinner time were apparently doing well with schools of small fish.

Enough slop to break through our port hole while we were at dinner and soak my bed. We are probably so-w. of San Miguel and there is a fair short chop running. Only a dozen or fifteen in for dinner despite the fact that the ship rides as steadily as the Rock of Gib. Hard to get used to the port list she carries to help overcome some engine defect. Otherwise there is no roll simply a slow rise and fall.

Cold out on deck tonight. Thank heaven I went back for my overcoat.

Saturday

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And so the long-planned trip to Laysan begins. Never were happier auspices from an ideal equipment to the heartiest of send-offs from the organization en masse, the Colonel and Sandburg, to Loyd and Albert to help with the 16 checked pieces of luggage and the 11 hand pieces! So here's hoping! Anyway, we shall see in what we shall see!

Sunday 3-25-23 Thin Fog Wind 4-6 (N.W.) Air 54°, Water 54°

; Pacific Ocean Sea Rough N.W. Course 260°

Lat. 32°53'N.

Long. 123°55'W.

Distance today 286 m., Distance to go 1942 m.

Day 22 hrs. 49 min.

Average speed 12.6 (All readings daily at noon)

Wandered out to the stern immediately after breakfast and found that the Western Gulls had deserted us during the night. Not one of the species remained. Their place had been taken by a flock that totalled 26 birds at its peak about 9:30 when refuse from the galley was thrown over. Six of these were Glaucous-winged Gulls. The other twenty stocky light-mantled birds were almost as certainly Herring Gulls.

About 11:00 a lone dark albatross hove in sight and I watched the marvel of its flight off & on till noon when it was joined by 2 more birds. They were unquestionably *Diomedea nigripes*. Several times they settled on the water in our wake and picked up morsels with up-raised wings and a petrel like outline. This sp. is known to the sailors as the "dark (or "brown" - or "black") gooney." I have not heard them pronounce it "gony" as Fisher spells it in his 1902 Laysan report. They differentiate it from the "light (or "white") gooney" which, they say never shows up till

Sunday 3-25-23

after we are half way across, and generally even nearer than that to the Islands. They are surprised to see even the dark sp. so early in the trip -- "generally not before the second or third day". Likewise they are quite certain they "are not albatrosses", being accustomed to the larger south Pacific birds.

Still quite choppy but the boat is incredibly steady, so it has served only to give me a ravenous appetite.

Monday 3-26-23 Noon 60° - Broken high fog - Gentle N.W. Breeze

Pacific Ocean Water 58°

Lat. 31°-23'N. Sea Smooth

Lon. 130° - 18'W.

Dist. covered today 335 m. - Av. speed 13.7 m.

Day 24 hrs. 24 min.

To Honolulu 1607 m. course 254°.

Not a gull in sight when I went on deck this morning. One dark albatross (*D. nigripes*) that followed us for 5' this morning was the only living thing seen all day on all the wide expanse of sea. Up in the chart room this aft. looking over their charts, examining my movie tests with the captain's microscope, and pacing the bridge alone, like Napoleon on St. Helena. Nearly every one down for meals today. Captain promises we will be out into full sun by tomorrow.

Tuesday 3-27-23 Broken high clouds Noon 59°

Pacific Ocean Water 62°

Lat. 29°39'N Sea Smooth

Lon. 136°43'W Light S-E breeze.

Course 253° Distance covered today 350 m. - av. speed 14.3
" to Honolulu 1257 - day 24 hrs. 26 min.

Tuesday 3-27-23 (continued)

Not a bird or fish or mammal all day today. Played shuffleboard, fooled around deck with the Pitners, Owsley, Wm. C. Baker (Holder's friend) and (silent?) Knight - all of Pasadena. As Owsley said, the only thing that was never silent about a Knight motor was Knight! Baker has been keen about the sea for years and was most interesting. Eat and sleep like a fool - what a loaf!

Breezing up unpleasantly out of the S.E. tonight but can still keep our ports open. For comfort one should always have a starboard cabin on this boat as they carry a constant port list.

Wednesday 3-28-23 High broken clouds and sun - Noon 68° - water 66° -

Pacific Ocean strong S.E. to N.W. wind - Sea "mod-

Lat. 27°49'N. erately rough"

Lon. 142°13'W

Course 249°

Distance today 311

" to Honolulu 946 - Day 24 hrs. 24 min.

Average speed 12.8

A poor day for most of the passengers but what a day for birds! The strong breeze of last night got up to perhaps 35 m. p.h. in the night and half boxed the compass clock-wise-going around with the sun-so that by the time I went on deck this morning there was a nasty brown sea and a strong 20-25 mile wind. Only the old-timers and the lucky appeared for breakfast. Counting myself among the latter, I was lonely in the dining room, my fruit, beef steak, but enjoyed eggs and cakes, for as the bridge players say, I always believe in "discarding from strength instead of weakness" when the worst comes to the worst (see large dictionary if W. comes to W.)

However, I remained lucky and did not have a qualm .

The moment I looked astern I saw we had picked up a crowd of fellow mariners, for the blank air of yesterday was filled with wheeling albatrosses. All were *Diomedea nigripes*, but they varied so among themselves as to be intensely interesting to study from the plumage standpoint as well as flight. Heretofore we have seen only young birds of last year without the light rumps of maturity and with the white forehead and ring back of base of bill subdued or almost wanting. While birds in this plumage are still in the great majority there are a dozen or 15 birds with white rumps and bill rings of varying intensity. I have an impression that adequate material would show 3 or 4 annual stages to maturity. Either that, or the adults vary as tremendously in respect to the white rump as do the smaller white-rumped petrels such as *O. socorroensis*. By evening over 50 of the birds had collected about the stern of the ship wheeling within 15 to 20 yds of me in eager-eyed expectancy of a hand-out from the galley. Unpleasant as the day has been for most of the passengers it has served to give me a feeling of intimate acquaintance with this dusky wanderer of the high seas.

Only 15 down for dinner. Wind and brown sea unabated. Ports screwed tight tonight, with occasional green water swishing by ours on "D" deck!

Thursday 3-29-23 Sun with only few wind clouds - noon 69° - water 69°
 Lat. 25° 42'N, Long. 147° 42'W Wind: NW 6-2
 Course 247° Sea moderate - N.W.
 Distance today 322 m. - distance to go 624 m.
 Day 24 hrs. - 21 min. - av. speed 13.2

This is the first sun-lit day that has given even a hint of the azure tropical cruise I had expected when once the mainland fog belt was left behind. The constant high smoky clouds of the past days have been a constant

Thursday 3-29-23 (cont.)

surprise and vexation to me.

The wind had dropped entirely during the night and only a gentle breeze from the N.W. remains.

The immense flock of "gooneys" has left us. We have picked up occasional birds all day but even as their peak in mid afternoon we had only a dozen birds and that dozen only for an hour. They apparently came and left on the wings of yesterday's "storm".

Saw our first school of flying fish about 2:00, and soon afterward a school of leaping fish that I took for small tuna, although they were not near enough to be certain. Another school of flying fish about 4:00.

Won the ship's pool today - my only effort of the trip - munificent sum of \$9.00.

Friday 3-30-23 Cloudy, dull rain at night - Noon 75°, Water 72°

Wind moderate S.E. Sea smooth

Lat. 23°24'N.

Long. 153°28'W

Course 246°

Distance 344 m. -To go 280 m.

Day 24 hrs 23' - average speed 14.1

Our glimpse of the sun was short-lived. Today it is dull and sultry with a calm desolate sea and what breeze there is boxing back into the S.O.

Only an occasional straggling "gony" today. Three at one time is the most I have seen. I watched for an hour in the moonlight last night but did not catch the shadow of a wing, so apparently they leave the ship at night.

No other sign of life today.

Drizzling rain set in in evening. Wind increasing. A Jap. T.K.K.

Friday 3-30-23 (cont.)

boat passed within a mile of us about 10:30 P.M. bound for the coast.

Saturday 3-31-23 Rain 1.45 inches- Temperature 70° to 77°- wind: Fresh S.E.
velocity 28 m.

Honolulu, Oahu Id., Hawaiian Ids.,

Lat. 21° N.

Lon. 157° W.

I have grown suddenly old in many spots of the world under many auspices, but never with less melancholy than this morning when I jumped forward to 36 years. Even the intermittent tropic down pour failed to dampen my interest in Koko Point and Diamond Head seen through cloud rifts as shower followed quick on the heels of shower, broke on the ship and passed as suddenly, the while we glided toward our berths. The crater rim of Diamond Head, mounting the heaviest of our Pacific land batteries particularly interested me. Next came the Elks' Club and the Moana Hotel by the shore of Waikiki Beach, with the new Dillingham place on higher ground and back of it all the misty broken lava range of which Nuuanu Pali, of ancient battle fame, is the lowest accessible saddle in the cliffs.

One adult (white-rumped) *Diomedea nigripes* followed us clear into the break in the barrier reef within a mile of our berth. A glimpse of a Booby (*Sula cyanops*) at a distance and of a couple of dark shearwaters, (doubtless *P. nativitatus*) completed the bird picture in which one from other shores is struck by the absence of welcoming harbor gulls. As we lay waiting for the U.S.Q.S. boat to come along side, 2 six-foot gentle greenish sharks appeared and nosed over the refuse from the ship's breakfast.

Dr. Wetmore and his only assistant, a chap named Reno, met us at the dock and gave me the welcome news that we do not sail till Wednesday next at noon.

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Once ashore the Mina birds () were everywhere. The English Sparrow is equally abundant tho less conspicuous. The Linnet is present, tho much less common in town than I expected. Twice I have heard the notes of the introduced Turtur here in the hotel grounds, and that is the total count for "Hawaiian birds" for today.

Went in town with Bibbe who came over on the ship with us and was good enough to drop by here at the Halekulani hotel for me on his way down to his office at the Auto Service & Supply Co.. Shopped -- found Herman Von Holt is on his way to New York -- dropped in on doddering old Bonine - Bryan's co-photographer-- and came back here to this charming restful old ladies home, run by Mr. & Mrs. Clifford Kimball, to rest up a bit before dinner. We were up at 6:30 A.M. this morning, so needed it. Feel the motion of the ship now -- did not on board!

Sunday 4-1-23 Rain: 3.71 inches - Temperature: 69° to 74° - Wind Fresh Honolulu. S.E. to S. breeze

This phrase "Honolulu liquid sunshine" became an April Fool joke. Came on to rain again in the night and poured steadily till 11:00 A.M.

Wetmore came out with Reno in the evening to discuss plans, or rather to tell me of arrangements for apparently everything has been worked out to his satisfaction and he seems pleased at the cooperation he has received since he arrived here.

Wednesday 4-4-23 Clear and calm - light N.E. trade Honolulu Aboard "Tanager" Steaming West.

Our sailing day dawned clear and calm with only the usual clouds back over the Pali range and the light N.E. trade wind that guarantees fair

Sunday 4-1-23

weather.

Went in town early with F. to get fruit and some last odds and ends and reported at the dock at 11:30 to stow the last gear below.

Promptly at noon (12:05, to be exact) we got under way "in accordance with the verbal orders of Lt. Com. S.W. King, U.S.N., in command of the ornithological expedition to the islands to the westward of Oahu", leaving a little gathering on the pier in which I could see but one figure in white till we reached the harbor entrance and swung out to sea. This leaving folk by sea is an odd job and an unpleasant one.

Our party consists of Dr. Alexander Wetmore (in charge) and E. C. Reno of the B.S., Stanley C. Ball, David T. Fullaway, Edward L. Caum, David Thaanum, J. W. Thompson and Chapman Grant. The latter to my astonishment proves to be an old school mate at Thacher and goes just as handy man for Wetmore. He is now Major, 27th Inf. U.S.A., stationed at Fort Schofield, but has a keen love of natural history and wants to get back into the game. We also have Eric Schlemmer, a son of the Max Schlemmer, whose name is indelibly associated with the Id. of Laysan, as guano manager, rabbit importer, etc.! The boy goes as my camera assistant. We also have a cableman reporting back to Midway from sick leave in Honolulu. He is an interesting New Zealander who has already put in one year on Midway and part of his second. He tells me that the Laysan Rail (*Porzana palmeri*) and the Laysan Finch (*Telespiza cantans*) which were introduced on Midway have thriven so that both are now common on that island. This is lucky, for if the rabbit invasion has gone its logical course I fear for all the vegetation and in consequence for all the land species of birds on Laysan itself. Ken also tells me that the Hawaiian seal (*Monachus schauinslandi*) is far from rare on Midway and that five were killed there in 1922 "for sport". One of the ♀♀ was carrying

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a well-grown foetus. He thinks this was in February, 1922, and had the sailing of a certain ship -- a rare thing on Midway -- to cross-check his memory.

Of the naval force Lt. Com. S.W. King, U.S.N. has been specially detailed by Admiral Simpson for the trip. He was born of part Hawaiian blood in the Islands, and has a fine record in the navy, so should be a distinct addition. Lt. Com. Talmadge Wilson has been similarly detailed as medical officer. He is a nut on fishing and has nearly as much tackle aboard as I have camera gear. In direct command of the ship itself is Ch. Bos'n Stephen Ingham (skipper) and Bos'n John D. Carroll (mate).

The "Tanager" is ideally suited to our needs. She is one of the big ocean-going class commissioned in 1918 as mine sweepers. She and the "Lapwing" were the first of their class to see service in the rough work of "sweeping" in the North Sea. She is 187 feet over all by 35 feet beam and rates about 1000 tons. Civilian quarters below deck are necessarily cramped with hammocks swung three deep in four tiers, but the officers have canvassed in the top deck forward of the pilot house for our use -- the anti-aircraft guns being dismounted for the purpose -- and there I, for one, intend to eat, sleep and have my being unless we get into a wild blow. We are equipped with a whale boat motor-sailor (launch), a dingey and a self-bailer from the cutter service for our landing work. The navy is to handle the chow etc. exactly as for landing parties, sending a Filipino boy and coon cook, who are hashing out the chow for our table now, ashore at Laysan.

Running along in the lee of Oahu this afternoon is a good bit of all right -- private yachting has nothing on this.

5:10 P.M. sighted Kauai on our starboard bow from crow'snest.

4-4-23 (cont.)

Ten minutes later we could all see it plainly.

Rolled in early after a wonderful day enjoyed by everyone except Wetmore and Ken, and some of the crew who (Co.E. the "crew") had been on an Okolehau jag the last night of shore leave. The long swell of the channel between Oahu and Kauai proved too much for them. I have dragged my air mattress upon "our" deck and am happy as a bug on the deck area where an anti-aircraft is usually mounted. Only three or four of the hardiest spirits, in addition to Schlemmer, who has sailed before the mast, and Ken have gone below decks to sleep, for we are battered down tight and the air is terrific down there.

Thursday 4-5-23 Clear, calm N.E. Trade Wind

Pacific Ocean en route to Laysan Id.

Meridien Position: Lat. $23^{\circ}09'N$. - Long. $161^{\circ}57'W$.

Rolled out at 7:00 to find the old "Tanager" rolling a bit in the full long swell of the Pacific; but she rides them like a gull and aside from actual discomfort of getting knocked about I imagine we'd do well in almost any weather even "top side" where we are most of us living.

9:05 sighted Nihoa on our port bow. This is one of the "high" volcanic islands sometimes known as Bird Id.

11:55 Nihoa on our port beam at a distance of 13.4 miles affording us a fine view of its rugged volcanic cliffs and sheer sea faces and ledges. It is no place to land a movie outfit, so I am just as glad this is a port of call for a later trip.

All morning (i.e. within 40 miles of Nihoa) birds have been increasing in numbers and particularly in species. Yesterday I noted only the ever-faithful Black-footed Albatross and a few terns in the distance near Oahu, and a handful of lone "mutton birds" which we took for *P. cuneatus*, but

this morning even by breakfast time birds began appearing in numbers and in interesting species. Species noted, Wetmore concurring in case of two which I could not have sworn to myself: Black-footed gooney (Henshaw, I notice, uses the "e" in "gooney") -- 30 to 40; Red-tailed Tropicbird, few; Booby (*S. leucogastra*) - 2; Blue-faced Booby - several; Wedge-tailed Shearwater - common; Love bird - few; Necker Id. Tern - few; Gray-backed Tern - two; Man-o-war bird - common. The latter all ♀♀ or young males of last year hum above our masthead and occasionally seized our commission pennant inquisitively in their beaks.

12:30 Passed a motor sampan under sail heading east.

3:10 Nihoa out of sight, and with it went our birds, save only for our old faithful gooneys.

A glorious calm day -- rolled in at 8:00 -- on deck again, joined by one or two more of the men who could not stand the bed bugs that appear to thrive below decks.

Friday 4-6-23 Clear N.E. Trade Wind - sea moderate - rough

Pacific Ocean en route to Laysan Id.

Meridien Position: Lat. 23°57'N, Long. 166°25'W

Slept through but Log shows we sighted "Necker Id." on our port bow at 1:15 A.M. 1:55 Necker abeam - distance about 7 miles."

8:50 A.M. Sighted French Frigate Shoals on our port bow and again our proximity to an island was shown by an increase in birds but in nothing like such a variety of sps. as yesterday -- merely an increase in such stand bys as Black-footed Albatross, Man o'War Bird and Wedge-tailed Shearwater. However I did see my first Laysan Albatross and also what I took for a Christmas Island Shearwater at this point.

9:00 Stopped for repairs to valve stem of main circulating pump.

9:26. Went ahead part speed.

10:14 French Frigate Shoals abeam. This is a fascinating group of low sand spits encircled by a barrier reef with a glorious volcanic pinnacle rising to the southward where the barrier is incomplete. From our position half an hour ago it (the pinnacle) looks very like a schooner under sail and there seems some doubt as to whether it was named because of this resemblance or because they were discovered or named at least by a French navigator in command of two frigates. The sand spits are in some cases almost awash in the roaring surf that pounds even over the barrier reef, but two or three of them have all the Robinson Crusoe lure of sand slopes where seal haul out and great green turtles bask and laze.

11:45 repairs executed. Bunch of porpoise this afternoon. Dr. Wilson missed a shot with a harpoon. We have seen several small schools, but this is the first one that has played about our bows in proverbial fashion. They sounded like a flash the instant the harpoon was hurled.

Flying fish have been almost constantly in sight yesterday and today, but even so the sea seems more devoid of life than the Atlantic in similar latitudes. Grant suggests this is due to the lack of sargossum refuges for fry, etc.

Dr. Wilson has kept a hard line and wooden bait out constantly but we have been making too fast time for fish to hit it. One or two have slashed the bait but failed to hit it squarely.

Wind and sea kicking up unpleasantly toward evening so that several of the boys have passed out completely and rolled in without dinner.

Dinner time came and our coon showed up with a sheepish expression, a big platter of pork sandwiches and the terse remark, "Cook sick, - Filipino sick, - ah sick too!" Wish that he fled! I don't wonder, for I'd last about 5' below deck. Grant and I polished off the last sandwiches and rolled in at

4-6-23 (cont.)

7:00 P.M. Rough enough to be darn uncomfortable and even tho one is not actively ill the solid deck to stretch out on is the pleasanest place and position.

Saturday 4-7-23 Calm and clear - N.E. Trade Wind - sea moderating
Pacific Ocean en route to Laysan Id. - Lat. 25°14'N,

Long. 170°33'30"W.

The wind had almost died during the early morning hours, so everyone except Wetmore and Ken are happy again despite a considerable hang-over in the way of a sea. We seem to be running out of even that, however.

9:15 A.M. Sighted "breakers 1 pt. on the starboard bow" from the crows nest. Slowed to 2/3 speed ahead. 9:20 slowed to 1/3 speed ahead.

9:30 reversed course at 1/3 speed ahead searching for a pinnacle rock or coral head sighted by Wetmore a moment ago close in on our starboard side within a few yards of the ship and submerged only a fathom or so. The milky water and soundings show we are on a shelf projecting out from Maro and Dawsett Shoal five miles further than the chart indicates. We are still 10 miles or more off the breakers yet the lead shows less than 18 fathoms. Failed to locate pinnacle on the return -- it's a big sea - so at 9:50 we resumed our course still at 1/3 speed. Breakers of the reef are now plainly visible even from the lower rail. They are lashing sky high in ugly white spume thanks to the fresh wind of yesterday.

10:12 increased to 2/3 speed ahead.

11:30 Maro Reef breakers on starboard beam. The reef gives us lee enough so I have just indulged in my first shave.

1:30 P.M. Held "abandon ship" drill, manning the boats to which we were assigned this A.M. when we were pussy-footing around trying to locate Wetmore's pinnacle before it located us!

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4:30. The look-out has just sighted Laysan due ahead of us. 4:40
Laysan appears as two upright fingers on the sky line - doubtless the 2 cocoanut trees.

5:50 - West end of Laysan Id. abeam.

6:10 - dropped anchor at the charted anchorage in 9 fathoms of water, with 60 fathoms of chain out on the starboard anchor.

As we were slipping into the anchorage Wilson had a strike from some immense fish that broke the wire lead line he was using and carried away his bait.

The second supper was over everyone on board, it seemed, broke out fish lines and before long one of the crowd flopped a 3 ft. sand shark over the side into the midst of about 30 whooping "jackies". - Wild excitement.

The sailors caught several more small sharks and ended up with a 230 pounder that Wilson had to harpoon to get on board. One of the sharks had an old corroded hook in its mouth such as the Japs have copied from the ancient Hawaiian model for one certain species of fish. It is barbless and shaped like this -



One "ulua" was the only edible fish landed - rest sharks.

Sunday 4-8-23 Calm, clear - N.E. Trade Wind - Sea smooth.

Laysan Id. - Lat. 25°42'14"N., Long. 171°44'06"W.

Everyone was of course crazy to get ashore, so I let them practise their landing crews on the others outfit and finally got my cameras & gear ashore about 10:30. Set up tent, which looks like T.R's outfit in Africa and after lunch set out to explore the Island. Went south along the west shore to rocky point at south end where there are interesting rocks in which Hawaiian Terns are nesting by hundreds with 20 or 30 Lover Terns and about 50 Gray-backed Terns.

One seen Laysan today with conflicting emotions. To one who has never

4-8-23 (cont.)

seen the great sea bird colonies it remains one of the most remarkable of bird sights. By the time I got ashore the first bloom of the area about the houses had passed, for already the thieving finches had robbed many of the tern nests whose owners were frightened from the nest by the ~~just~~^{first} landing parties. Even so enough remained to give me a realization of how completely the birds hold sway here save only, when man or man's introduced pests compete. To my surprise I found awaiting me the remains of 7 or 8 old shacks in various stages of collapse, and Schlemmer tells me there were even more when the guano gang of 50 or more Japs was in full career. Before the main shack stand the two cocoanut trees that hold the record as being the only decent thing man has ever done for this island. In front (West) lies a charming circular cove with a narrow break in the reef thru which we glided peacefully on this calm morning while the long swells pounded and broke on the reef a hundred yds each side of us. The break in the reef is so narrow, however, that I can imagine the landing would take trained men to negotiate in a brisk breeze even from the No. E and with the wind in any other quarter it would be impractical for cameras at least.

Even from the whale boat I could make out the birds, but as it grounded and I jumped out on the glorious curving beach I began to make out the species which as I said, have completely taken possession of the tumble-down settlement. The flat roof of a former cook shack is black with nesting Hawaiian Terns (*M. hawaiiensis*) which rise and settle back in only momentary surprise rather than alarm as the sailors pass with their loads of grub and duffle. Among them are 3 or 4 pairs of the gentle white Love Tern (*G.a. Kittlitzii*) covering their lone egg on the rafters and plate sills of the old buildings without even one twig for a nest just as they do in their more natural habitat where their egg is laid and balanced in even the

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slightest depression on top of the limbs of trees and bushes. The Hawaiian Terns build at least a semblance of a nest of seaweed etc. and crowd into close-packed nesting colonies. Two Laysan Albatrosses still held sway on the front porch while a ridiculous brown fuzzy youngster sat back on his ^{heels} and snapped his beak in childish threat as the crew worked too close to him. Red-footed Boobies, with a sprinkling of Hawaiian Terns, crowd every available nesting site in three bushes south of the buildings and make ludicrous threats with ruffled feathers, shrieks and bill thrusts at passers by. Luckily they stick to their nests until almost touched, for the finches (T. cantans) make short work of any egg.

The incubation was slight to nil in the broken Booby eggs I saw. The windows ^w and doors are all gone, and the sand has drifted 3 feet deep in the main buildings where the Schlemmer family used to live. But the house is far from empty. Wedge-tailed Shearwaters sit in pairs in every corner. Two pairs of Red-tailed Tropicbirds sit side by side on a drift of sand - taking the shade of the building's interior in lieu of bushes. A pair of finches are nesting behind the broken pane of an old window and stray individuals are hopping along the sills and rafters looking for any tern eggs that might by chance have escaped them during the flurry among the Terns when the first boat landed. I fear they got them all in the main house which Wetmore is to use as laboratory. Luckily one Hawaiian and one Love Tern have hatched and the fuzzy youngsters are safe from the marauding Finches. Outside birds are scattered everywhere, but not packed in colonies except in the case of the Red-footed Boobies and Hawaiian Terns. It is apparently only the overflow from the roof colony that are nesting in the bushes, coconut trees, lumber piles and main house. The Finches hop about over the sand inspecting each new bit of duff or grub that is lugged up

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from the boats, and seem utterly devoid of fear. Two Bristle-thighed Curlews stalk about behind the tents on the high bare sand ridge. Scattered everywhere are Wedge-tailed Shearwaters in pairs squatting at the burrow mouths. Apparently they are but just arrived for they sit side by side above ground or more rarely in the burrow. Most of the burrows are shallow as tho but just begun. The Tropics, too, have not laid. The Hawaiian Terns of this colony have 90% eggs, 9% nests under construction and only a few young. Red-footed Booby fresh eggs. Finch ? Love Terns incubated eggs or young.

Yes, the birds are here at least in so far as the common sea fowl go but the striking thing is the VEGETATION -- or utter lack of it, rather! Verily, the dammed rabbits have done their worst. As far as I can see with ~~the~~ the glasses and from our hurried trip down the islands there is not a living bush or twig or spear of grass left on the whole island outside of the two poor cocoanut trees and the 3 bushes near the house that Sula piscator has preempted -- and two of the latter are leafless! Apparently the swarming host of rabbits has gone the limit. The once green island is today a desolate sand waste that might as well be a salt sink in one of our barest sand deserts. In fact the salt lagoon which occupies the whole center of the island, and to which all the fringing ridges of sand slope down, gives the simile striking aptitude. In my wildest pessimism I had not feared such utter extirpation of every living plant. I had hoped that the rabbits had wrought their own destruction in the general ruin, but those who went east and north report two small patches of close-cropped "pickle" weed (*Sesuvium* sp?) that still support a remnant of the cursed host. The sailors killed them with stones and Reno with a rifle. In all probably 50 were accounted for.

Wetmore collected a pair of seals (*Monachus schaunslandi*) before I had

the camera outfit "broken out" and ready for use. They were so tame that the ♀ hardly bothered to wake up even when he shot the ♂ close beside her. The ♂ was dingy yellowish -- the ♀ a handsome mole gray. The sailors who were given shore leave got within 5' of another pair and put them to sea. I'm mourning the fact, for stupid as they are when once they have "hauled out" they are keen of scent according to Schlemmer and will not land where there is fresh man scent or disturbance.

Half a mile south of camp in another cove something like Camp Cove we came on 5 of the big green Turtles (*Chelone midas*) fast asleep on the sand. The largest would have gone well over 200 pounds. "Them ain't big ones" was Schlemmer's only reply to my interest in their bulk.

After lunch we broke out a camera and made a more extended reconnaissance to the south. Our turtles were gone, frightened and plagued by the sailors who are like a bunch of wild kids out of school. Followed the high sand ridge down the west shore through scattered Laysan Albatrosses and thousands upon thousands of Wedge-tailed Shearwaters. The monotonous regularity with which one's foot-breaks thru apparently hard sand into their burrows of former years is exceedingly wearing on temper and legs. The south end is buttressed with sheer rock ledges ten to fifteen ft. high of coral limestone. Against these the long rollers break in perpendicular spume. Since the prevailing fair wind (N.E. Trade) is off shore it leaves a level dry rock ridge or dike. On the seaward side there are hollowed ledges that make fascinating natural shallow aquaria sometimes ten feet above high tide. On the land side is a rock-choked depression into which a pool of sea water surges thru a hole under the dike. On the broken blocks just above the water of this gulch - hundreds, if not thousands of Hawaiian Terns are nesting. Half of the nests contain a single lightly marked egg. Half are just building. Among them and also on top of the dike almost in the spray of

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a powerful surge Gray-backed Terns are beginning to lay their single egg on the bare rock or on the wave sand in depressions in the top of the dike. But best of all is the Love Tern, balancing its egg on the most astonishing narrow ledges or even on top of pinnacles where any slightest movement would dislodge it. It would be interesting to see the parent roll an egg over in some of the more precarious sites. They lay a highly marked egg that for variety reminds me a bit of the eggs of Xantus Murrelet. Add to their nesting interest the charm of their gentle personalities as they hang motionless and silent in the air peering - curiously at you within a dozen feet - add their fluttering dove-like flight, their immaculate plumage, soft black-rimmed eye and blue (basally) & black bill and it seems to me you have the most utterly charming sea bird I have ever met. There is no screaming reproach and no apparent alarm as you approach the "nest" - just a gentle curiosity. One of the boys even had one alight on his outstretched motionless fingers, so that by closing on its toes he actually caught and stroked it. Verily Gygas (misspelled attempt to perpetuate Ulysses' pilot?) should be the "Dove of Peace" emblem for the navies of the world.

The island is, according to the "Hawaiian Island Navigator" (?) 1 3/4 m. long by 1 m. wide + 55 ft. high, and contains a salt lagoon or lake in the center fully a mile long. We came back by way of this lagoon after circling the So. E point of the island past a scattering of Black-footed gooneys.

They are almost entirely wanting from the west or lee-side of the island. Here I first saw the "dance" of this bird. I had heard so much of the "dance" of the Laysan bird that I was frankly surprised to find the brown bird doing fully as interesting monkey shins. In fact one pair of nigripes gave the best "song & dance" I have seen and heard yet.

Down by the So.-W corner of the lagoon we came on a stunted patch of

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tobacco run wild from an ancient Schlemmer planting. Here Laysan Albatrosses were more plentiful than on the high sandy ridges, but either the colonies have never recovered from the Jap slaughter, or else they have scattered through what was formerly brush area and therefore seem scarcer. Certainly I have seen nothing to remotely approach in density the population of areas shown in old time photographs. The young, too, seem scarce in proportion to the adults.

Here the Man-o'-war Birds that are just mating on top of the bare So.W. ridge on the leafless foot-high stumps of former bushes are further advanced - many pairs having eggs and almost all having nests. To my astonishment a Turnstone (*A. interpres* [cahuensis]) rushed up to a ground nest vacated that second by a Man o'war "Hawk" and pecked a hole in the fresh egg and began devouring it with evident relish. The dexterity and relish betokened long training.

Three or four pairs of Red-tailed Tropicbirds have eggs in this area and perhaps the same number of *Sula cyanops* are scattered about the flat incubating stained and apparently "hard-set" clutches of 2 eggs each. *S. piscator* had only one egg in the nests I saw.

The lagoon shore swarms with thousands of turnstones and Pacific Golden Plover. Imagine my delight when out from a dense swarm of these shorebirds waddled and swam a lone drake Laysan Teal - probably the rarest duck in the world, for this may well be the last survivor of the species. But while there is life there is hope. So far, we have not had a similar thrill or comfort by sight or sound of the rail, honey-eater or miller birds. The rail I expected in the tobacco patch, but not a trace did we or anyone else get of it today. Luckily, Ken tells me, they (rail) are well established on Midway.

As we came back across the dry sand waste to camp we ran into a curlew

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feeding on a fish that had probably been dropped by a *Sula cyanops* as it ran the gauntlet of the Man-o'-war bird colony. It seems striking to find this tender-billed shore bird-turned scavenger and even cannibal, for some of the boys saw one devouring a tern's egg!

I found the body of a recently dead Bonin Island Petrel (*A. hypoleuca*) but no signs of it above ground. In the vast mass of Wedge-tailed Shearwaters scattered everywhere over the island we noted only a few dozen *P. nativitatis*. However, as evening approached they appeared in greater number near camp, so it may merely be that they are more nocturnal than *cuneatus*.

The rarity of the Red-tailed Tropic worries me. Piecing together the dope of those who went in the other directions there seems hardly a dozen pairs on the island and the wild sailors have pulled the tail feathers out of half of those. It may be early, but since *P. rubricaudus* usually lays on the sand in the shade of bushes it may be that they have left for other islands to nest now that this is a glaring desert.

Speaking of glare - the utter lack of green eye relief makes the drifted coral sand almost unbearable to the eyes - only my helmet is going to save me, for I fear I will not be able to judge light changes and focus with the dark glasses.

Looked in the rocks at So. end and in the guano rock piles near the tobacco patch for *Bulweria* and *Oceanodroma* but with out avail. I would expect them both to be late arrivals on the island.

In the distance as we came home we saw a vast hovering circling crowd of thousands upon thousands of *Sterna fuliginosa* that act as tho they had just arrived and had not yet settled.

Monday 4-9-23 - Cloudy early - sun No. e. trade

Laysan Id.

Decided to do a good bit of scout work before getting down to brass tacks with the movie.

Cloudy at dawn but by 9:00 it had broken away into the glare that seems typical under these No.e. trade conditions.

Wilson, Wetmore, Reno and I struck out east and followed around the No. end of the lagoon through the two damp patches where "pickle weed" is still clinging to life. Killed a few more rabbits. The remnant of the former host is necessarily congregated here.

The Laysan Albatross also seem to like this green stuff and are thicker here than anywhere else on the island.

Just beyond the larger patch No. e. of the lagoon the Sooty-backed Terns apparently intend to nest, but for the moment they are still a circling screaming undecided mass of whirling feathers and a babel of tongues.

Best of all was the sight of a flock of 11 Laysan Teal out waddling around in the pickle weed. They were never abundant - totalling perhaps 60 at their peak according to Schlemmer, so it is a delight to find they have survived the sanding in of the old fresh water pond and the extirpation of nesting cover. We also saw a pair together in another part of the same damp patch.

Finding the Teal gave me renewed hope of finding the Rail, for it would seem that he was better adapted to survive in the low matted pickle weed that is left in these two spots than any of the other endemic residents. But not a trace of Rail or Honey-eater or Miller Bird could we find.

Finches were common among the rocks where the Sooty-backs are to nest, and also down among the albatrosses and shearwaters in the pickle weed patch.

Wetmore collected a Wandering Tattler from among the thousands of Turnstones and Plover.

On the way back I saw a Curlew break and eat a Gray-backed Tern egg and

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also saw another curlew run in behind us and smash a Blue-faced Booby egg a moment after we had unintentionally frightened the owner from her eggs. *S. cyanops* is more common at this end of the lagoon. We passed perhaps two dozen scattered nests. All were on the ground, of course, and those noted contained two eggs or 1 egg and 1 young. Apparently, from 6 or 8 new born young & pipped eggs, the "colony" is beginning to hatch today with considerable uniformity. I quote colony because they are in no wise so gregarious as *S. piscator*. We have found no piscator nests except those crowded together in the one ironwood tree & 2 dead bushes near the houses.

My ear has got infected and will have to be incised, so I came aboard at noon in the belief Wilson was to follow immediately in the dingey. However, he did not come off until the last boat so I am having to spend the night aboard. Wilson lanced ear down in "hospital room". I have never had a minor operation under less pleasant conditions than sitting on a box in a sea way down in the stink below decks while a navy surgeon cuts & carbolizes with raw acid! -Now I shall have to sleep "below" for fear of catching cold in said ear. Got two square meals out of it at officers mess anyway!

Tuesday 4-10-23

Laysan Id. Clear, high No. e. wind

Between the ear and the bed bugs I put in a second rate night in the foul air below decks, and was glad enough to roll out at 6:00.

At 7:00 they put over the whale boat and landed a work party of two men to finish shovelling the sand out of the main house where Wetmore and the Bishop crowd are to work. The wind and sea had come up during the night and it was wet tricky work getting from the Jacob's ladder to the whale

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boat. I got off with only a stubbed toe, but Fullaway went sprawling headover heels and must have bruised himself considerably.

Ball & Caum stayed aboard and about 9:00 the ship got under way to let Ball & Caum do some off shore "trawling and "dredging" for marine invertebrates etc.

Wind blowing so hard that movies in the open were out of the question, so Schlemmer & I went down to the protected hollow or "blow-hole" behind the natural dike at the so. end and made a dozen plates or so. On the way back we ran into 5 turtles and made some film of Eric "rollin" them etc. They are helpless on their backs but the big ones are fiends to turn. (Hence I suppose "turn turtle"). Brought in a small one of perhaps 50 lbs. to eat.

In making the tern stills the colony was so dense I had to sacrifice some of the eggs that were under or too near the tripod, by keeping the parents off the nest too long. Brought in 4 or 5 of the Love Tern eggs.

Surf too high to land a boat this evening.

Wednesday 4-11-23 Cloudy early - clear - No. e. wind - Temp. 8:00 AM

Dry 70° Wet 65° Rel. Hum. 77%

Temp. 7:00 AM 64°

Mo Temp. 78° 6:00 PM 68°

Cloudy till 9:00 so fooled about camp making some plates of a Red-tailed Tropic Bird that insists on coming into the kitchen and when not allowed to do that sits outside the door.

Surf still breaking occasionally clear across the narrow channel, but about 6:30 they got out the whale boat with all the jackies in life belts and came through easily enough, bringing Wilson ashore for the day and

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taking off the "work party" that were marooned here last night.

Wind has dropped to the normal no. e. trade, so as soon as Wilson had dressed my ear Schlemmer and I started for the So. end tern colony again.

The true Noddy (Anous ^s~~stolidus~~) is present in considerable numbers, tho much less common than Micranous, and is either a later nester, or else is disgusted with the lack of bushes it used to nest in. No signs of nesting or of even contemplating a colony site in any event.

Wilson went shark fishing in "Shark Hole" at N.W. corner of the island and caught 2 of the host that swarms there. These are a different sp. from the Sand Shark they are getting on board the ship, having a white-tipped dorsal fin and other specific if not generic differences. To noon today the crowd has accounted for 38 sharks.

But the danger of the island lies not in sharks but in the chance of stepping on one of the hundreds of rotten gooney eggs that litter the island everywhere but particualrly in the vicinity of the lagoon where the nests may have been flooded out. At any event they have lain in this blistering sun since Feb. and are in highly explosive & nauseous condition. One I measured was $4 \frac{1}{8}$ " X $2 \frac{1}{16}$ ". "Watch your step" is our motto. Yet Wetmore saw a curlew top one of these disgusting messes today and sip its stinking contents with evident gusto. This must be rare, however, for a number of gooney eggs near camp have been passed almost hourly by the dozen or more curlew that have set up as camp scavengers without being even eyed or molested. If they regularly ate gooney eggs the latter would have disappeared long since. Most of their thieving is probably restricted to the eggs of the Man-of-war Bird as a maximum & from that on down, with particular emphasis on tern eggs. It strikes me that the inability of the small birds to hide their nests from the persecution of the curlew, finch & turnstone under present bare and denuded condition may well be the actual

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within 30 feet of it I realized that instead of being wounded it was a *Sula leucogaster* struggling with a squid that was a bit too big for it to handle. There could be no doubt as to diagnosis as I am familiar with the im. plumage of *S. cyanops*. There is simply no bird it could be confused with. Another island record.

It interests me to note the uniformity in size of all the young albatrosses of both sps. on the island and the seeming scarcity of young in comparison with adults. It can mean only one thing: that is a uniform laying season and then in addition an inability to "repeat" in case anything happens to that first prize egg. Those two things seem axiomatic - else we would see young of varying sizes, but such is strikingly not the case. The young of *D. nigripes* & *D. immutabilis* are superficially alike, but *nigripes* may be told by its heavier bill.

At this stage, too, *immutabilis* yng show the white of the juv. plumage just starting if one parts the brown silky natal down, where as *nigripes* is of course brown clear to the skin even on breast & belly.

In shifting our cameras we had to disturb 5 Gray-backed Terns. To my surprise I found the idiots had not grown accustomed to the cameras even in the 2 hrs we were away at noon. Altho I fear they will be hard-baked I took the eggs to try and save them.

Tonight the Man-o'-war Birds were out in front of camp robbing and mauling Wedge-tailed Shearwaters and Boobies as they came in with their honest spoils. Boobies are so scarce on the island that shearwaters must furnish the bulk of fregata's toll.

Thursday 4-12-23 Clear N.E. Breeze - Temp. 7:00: 67°

M. Temp. 6:00 - 70°

Laysan Id.

Back to the same tern colony to finish up with some High Speed stuff.

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Christmas Id. Shearwaters are daily becoming more common. They are still only a drop in the bucket as compared with ⁿcuneatus, which I believe to be easily the most common bird on the island. Speaking of P. cuneatus Wetmore even went so far as to say he thought it out numbered all the birds of all other sps. put together. I am not ready to say that for the Sooty-backed Terns would in themselves make a vast host to offset, but his generalization certainly has a basis for its advancement.

Laysan Albatrosses are common but scattered. Terns swarm but only in local colonies, while Wedge-tails are common to abundant and are everywhere! Among them now, as I say there is a sprinkling of nativitatis sufficient so that they no longer attract more than the most casual attention as they scramble out from under our very feet in an odd indescribable beetle-like scurry. The feet of these sea birds are all wholly inadequate to support them decently and the resultant gaits are laughable. The Tropics can not balance themselves at all, but buck & plow along on their breasts. However, they rise from the ground easily due, no doubt, to the fact that the wings have such a short beat-arc & descend so slightly below the shoulders at the bottom of the stroke. The Shearwaters, as I say, have a low horizontal unbirdlike scramble like nothing so much as an overgrown beetle. The gooneys have a variety of bowery swaggers. The Man-o'-war Birds rise with difficulty and do not attempt to walk, and so it goes.

Finished up what film I want in slow motion of this particular tern colony this afternoon & lugged in the H.S., leaving only the Parvo & 5x7 to get some shots of the only jaw. Love Tern in the colony tomorrow when the early sun is on the . . . Five miles or more under heavy back packs in this heavy sand broken with shearwater pitfalls is a mean days work and I am dreading the 2 hours of film & plate changing before I can roll

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in.

Saw the biggest ear-wig of my life under a rock in the tern colony and got some for Fullaway.

At supper tonight a Man-o'-war bird actually seized, upset and knocked down into the water a bird I took at a distance to be *P. cuneatus*. There are so few boobies and so many hundreds or thousands of *Fregata* that the latter must prey chiefly on some other species probably *cuneatus*. I had no idea how rough the darn things were with their unwilling hosts and purveyors.

Later - Schlemmer & the Filipino boy have just come in with 30 crawfish & an eel to show for 2 hrs, "Jacking" and spearing on the reef, and the whale boat with a "shore leave" gang has just put off with 75 more. As Wetmore says, "Any man who couldn't find food on this island would starve to death in a grocery store".

Friday 4-13-23 Clear No. E. Wind - Temp. 7:00 AM: Dry 70° Wet 68°
Laysan Id. R.H. 90%
Noon 89° 6:00 PM 78°

Back a last time to the Tern colony to get the morning light on the only Love Tern juv. that has hatched. Remarkable propensity for clinging despite his webbed feet is probably a result of the arboreal life of the yng. He grips your finger and balances and clambers about almost more nimbly than the yng of perching birds. His home on a point of rock is only 4 feet or so above the tidal pool into which the water flows from a subterranean channel under the coral limestone dike. From his perch he can see swarms of little fry just suited to his needs. When it comes feeding time his gentle parent makes a 4 foot plunge from her (his) post

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beside the yng. and is back in the bat of an eye with a tiny shimmering morsel. The whole thing is utterly charming. The adults as I have said are beyond compare in their gentle grace and beauty. The eggs are the most variable and interesting of all terns I know. The yng. a silent alert brownish buff mite that is more active and capable than any tern of his age. The setting a rugged pinnacle that must seem a veritable eagle cliff to the youngster. And below him not 4 feet away the myriad life and tern food of a tidal pool to watch, and one day learn to catch! The famed Albatross dance was a frank disappointment to me, but these Love Terns have fired my enthusiasm as almost no bird has ever done. ~

We snapped several stills of the youngster & made some film but unfortunately the sun left his perch in shadow before the parent decided we were harmless, and fluttered down from the rim of the "cliff" to give him the two tiny fish she had been holding for him for some time - holding cross-wise deep in the inner angle of the bill.

All the other Love Terns save 2 in the colony about the houses have only eggs todate.

In view of the boat's departure tomorrow I worked around camp this a.m. doing odds and ends that have been neglected in the excitement of work in a new area such as this.

The colony of *Sula piscator* near the houses is doing pretty well - the birds sticking to their guns despite passers by. At 10 feet they merely make futile stabs at one or pay no attention whatever. As one approaches closer they give a terrifying squawk or scream & ruffle up fantastically.

There are perhaps 50 birds around camp in the ironwood "tree" and the 2 or 3 dead bushes. All of these save 3 are in normal adult plumage. Of the 3 exceptions one has almost attained full plumage lacking the coral red

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& blue (basally) bill & full rich red of the feet and the white of the back. Instead its bill is a purplish throughout - a sort of blend of the two colors which separate into distinct areas in the adult. The feet are a faded pinkish red and the back is marred by occasional gray feathers. This bird is the only one of the 3 which roosts with the nesting colony. It sits beside an incubating bird in the ironwood tree, but I have not yet seen it incubate so am not sure whether it is mated or not, tho I am temporarily assuming this to be the case. The other two are gone most of the day and when they come in roost in the cocoanut trees instead of with the colony. These I am assuming are unmated immature birds. One has the full gray wings, gray back and pectoral band of the immature of last year. The other is half way between this bird and the subadult in plumage. The question is: Does it take more than one year to reach maturity or are these 3 birds cases of delayed moult? I should say from watching these 3 birds that it certainly takes them 2 years to attain full plumage and very possibly 3. All 3 immature birds have the unicolor purplish bill instead of the bi-color red & blue base-edging of maturity.

Wetmore took a ♀ *Puffinus nativitatis* this morning with a fully formed egg in the oviduct ready to lay.

One thing I forgot to mention about my pet Love Terns. They are so gentle and mothlike instead of tern-like in their silence that it surprised me to see one of them give chase to a turnstone today that was invading the colony and drive him Hell-bent-for-election clear out of sight over the hill. These cursed little turnstones just live in the colony wandering from end to end of it watching for an unguarded egg.

As we sat at lunch there was a terrific crash and we looked out to see a surprised and sheepish Laysan Albatross picking himself up from the ground. Apparently he ~~so~~ forgot himself and his aerial habit as to perch on a

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cocoanut frond, lost his balance & crashed 15' to the ground. To watch him waddle off, shaking his feathers into place & eyeing first one side or another of himself and then occasionally looking back exactly as tho to see whether we had seen it all was so human as to be screamingly funny. Later in the aft. a Laysan Albatross rose too high on his tiptoes to bugle at the end of his dance step, lost his balance and fell over on his back. It was several seconds before he could get rolled over & back on his feet and when he did the first thing he did was to look around exactly as tho to say "who shoved me?". There is glorious comedy in these birds but it is so rare that the chance of getting the interesting things in the movie is nil. The best I can hope for is a bare record of outline and commonest movement, and personality and I will not get that of all the species in the time allotted. I had thought of this light as ideal, but the wind blows night and day to ruffle feathers the wrong way etc., and even the light is less desirable than the mainland. Ratty soft gray clouds scud before the trade wind and are forever banking up into dense masses just when you want to crank some interesting action. Then at midday the sun glares through with a tropical heat haze and a chalk & crayon effect that is worthless for the movies. And even if one wanted to use it the glare & heat almost instantly dope all activity out of the birds. By 3:30 or 4:00 when the birds begin to wake up the sun drops behind a cloud bank again. It will be no sinecure - this trip - for results, but I wouldn't have missed the sight and experience for worlds.

Used up some bum (light struck??) film on the sailors packing the outfit down to the whale boat.

At 7:30 the boat came ashore ~~FOR~~ a last time and took off everyone save --, Thompson, Rene, Senlenner, the coon & myself. They are due back for us

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the 28th or 29th.

Photoed Wetmore's beard in front of booby colony the last thing this
aft. He reserves rights of censorship.

Movie

Neg. No. P 7

Date 4-13-23

Subject Crowd starting back to ship before sailing for Midway -

Sailors macking - shove off etc.

Camera P.

Distance -

Lens C.Z. Focal Length 50 mm

Stop F 11

Exposure 7 - 16 p-s

Light Aft. sun

Time 1 A.M. 4:30 P.M.

Plate C. O.

Developer

Dev. Paper Exposure

Remarks Light struck film

Quality

Donald R. Dickey

Saturday 14th Cloudy-dull to bright strong No. E. wind

7: 69° - M 77° - 6:71°

Boat left at 7:30 & by 8 we were marooned with no sail. Too cloudy -
E. & I around no. shore - back across largest green patch & teal - Reno saw a
Rail here before we got there.

On down to tobacco patch So. W corner of lagoon Brown gooneys all on
windward side & as tho to compensate jng are in deeper holes - Dance finer -

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both wings out - Laysan A. one wing.

Back to Tobacco patch P.M. Tropics rare - must have shade to nest under. Only one in T. patch in shade of rock for morning sun. Took one Xmas egg. Boobies of both sp. present. I must have overlooked on 1st day - ~~pi~~^{sc}. as high as possible (1 ft) - cyan. on bare ground Gray-backs small col. - Haw. Tern good col. just bldg. 2 or 3 pr Love Terns sever. hun. Black backs but no sign of eggs yet. No sign of W.T. Shear eggs yet ♀ bird taken largest egg 4 mm. ♂ bird also taken - mate. Made nest pictures - interesting place blew eggs - test developed - skinned 2 shearwaters Reno saw rail
Birds collected Today

#1 - Puffinus cuneatus. ♀

Largest egg in ovary 4 mm. taken from 2 foot burrow on sand ridge near camp. Mate of #2

#2 - Puffinus cuneatus ♂

Taken from 2 foot burrow on sand ridge near camp in company with #1.

Sunday 4-15-23 Trace of rain last night- cloudy brt. to dull

Laysan Id. Temp: - 7:00 A.M.: Dry - 68° Wet - 66°

Rel. Hum. 90%

High No.e. wind. Temp: Noon: Dry 78° Wet 72°

Hauling to e.

Temp. 7:00 P.M. 71° Rel. Hum. 75%

Temp. 7:00 P.M.: Dry 70° Wet 67° Rel.H. 86%

A more trace of rain several times during the night, with high wind continuing this morning and a constant cursed procession of gray cloud banks.

Took the cameras and worked down the lagoon shore toward the tobacco patch at its so. w. corner but had more aggravation than success. Altho I did get 200 ft. of film in breaks between the cloud bank - . A sudden gust smashed my glasses so I had a trip clear to ^{camp to} add to my discomfort.

The only real, bright spot was when we came on two of the almost extinct Laysan Honey Eater (*Himatione traithii*), a charming little red mite of a thing that has well-nigh passed with the passing of the vegetation. This is the same place Reno saw his 3, so as far as we now know we were looking at 2 of the 3 last survivors. They had done their best to adapt themselves to the changed environment and were scrambling about among the rocks and on the guano earth picking up small flies. Their charming song is out of proportion to their size. Altogether they cheered my morning immensely, altho their future can be only extinction unless a more rapid restoration of the island can be effectual than I think possible.

Back to the "tobacco patch" so. w. of lagoon for whole afternoon. Continuation of aggravating cloud banks & moments of misty rain.

Saw a single *Himatione* near same rocks we found them in this morning.

Crossed the sand ridge through scattering Laysan Albatrosses to the So. E. end of the island and made some surf film that I fear will be second rate.

Back to the tobacco patch, amid the swarming host of *Sterna fuliginosa* that apparently intend nesting in the shade of the sparse green tobacco leaves. No eggs as yet and a ♀ coll. had no egg larger than 3 mm. in ovary.

Several pairs of *Sula piscator* interested me. The mate seemed quite solicitous as to the well fare of the incubating bird and came to the nest at frequent intervals. Altho the egg was in each case laid and inc. begun

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the returning bird in almost every case brought a green tobacco leaf as an offering. The inc. bird would take it and tuck it first on one side & then on the other of the nest rim with a great show of bustling activity.

The most interesting observation, however, might be termed "the parasite parasitized". The Man-o'-war bird is the most notorious rogue, getting most of his living by robbing other species - notably Sula and Puffinus of their booty when they come landward from their fishing. Even his nest material seems to be stolen in good measure from his neighbors' supply. He has been reported as even cannibalizing nestlings of his own sp. Imagine my surprise, then to see a Bristle-thighed Curlew taking issue with a o' Man-o'-war bird in the latter's nest, where he was inc. an egg! The curlew slipped up tactfully from behind and pecked and pecked and harried him time after time. The clumsy (on the nest or ground) Man-o'-war bird would turn and fight back, but the nimbler curlew easily evaded him. Finally, after a particularly vicious and tantalizing assault the Man-o'-war bird forgot his precious charge and lumbered to wing. Instantly the curlew rushed forward to his prize and with one blow of his beak broke open the egg he had been after all this time and began to devour its contents. In an instant he was joined by 7 other curlew rushing to the feast and by 6 turnstones which tagged at the bigger brigands' heels. Afterwards we saw this perverted band systematically going over the colony for (some defenseless) tern with an egg, or for a larger bird that could be harried from its charge. Finally I succeeded in filming the same organized band in a similar attempt on another o' Man-o'-war bird. This time they failed in their purpose, seeming to lack the assistance of the perhaps now surfeited "snock troop" leader. Anyhow, the o' Man-o'-war bird stuck to his post, and the ring of cunning curlews that had surrounded him gave it up as a bad job and trooped off.

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to find an easier mark. Wetmore suggests this may be a method of supplying the lack of fresh water, certain it is. There is a high mortality among the shorebirds - particularly the Pacific Golden Plover, with the curlew mortality rating second. The plover seem to die with head & neck stretched straight ahead of them & flat to the ground just as Wetmore has noted other birds dying of alkali poisoning, so it seems almost certain that the extreme salinity of the lagoon, which froths up like Great Salt Lake into shore drifts of foam at the least lapping of waves, affect the plover adversely.

The whole mating cycle of fregata is a fascinating thing I wish I had time to really study. Only a few of the hundreds upon hundreds of birds on the island have laid, so the males are at the height of their posturing and gular inflation. Apparently the male chooses the site for the nest, for in many cases I have seen a ♂ posturing & imploring from some dead bush stump or rock where later a nest would be started. Here, on the chosen site, he sits with pouch inflated to bursting, scanning the sky for passers by. When a bird of his sp. appears the head is thrown back, bill pointed straight up and wings thrown forward until the primary tips lying on the ground in front of the bird make one certain the wing is dislocated. Finally a ♀ descends beside him. This seems to be a signal for any other unmated birds to gather in until ^{often} ~~at~~ an old ♂ will be the center of an admiring or envious crowd of 5 or 6 ♀♀ & ♂♂. Then the process of stealing a crude mass of sticks from their neighbors sets in. In this apparently sexes join, the theft always occurring on the wing by a quick snatch in full career. Then the egg arrives. Both sexes participate and both are often on the nest together. Still they may be surrounded by a crowd of other birds still, too, the male postures and inflates his pouch at passers

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by. Lastly there seems a sort of community nest which may be the home of the earlier circling crowd of younger ob'. Finding it impossible to steal his nest material they heap added material around the edges until sometimes 3 or 4 eggs will be laid on what is really one crude hit or miss platform.

Birds coll. today

#3 *Puffinus nativitatis* ♂

Collected by clapping my helmet over it as it sat above ground on sandy ridge near camp.

#4. *Puffinus nativitatis* ♀

Largest egg in ♀ ovary 5 mm.

#5. *Sterna fuliginosa* ♀

Tobacco patch colony of which none are laying yet. Largest egg in ovary 3 mm.

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Movie

Neg. No. P 9-3

Date: 4-15-23

Subject Laysan Albatrosses taking off from small green patch So.W.

corner of lagoon - rolling foam ? I-F.O.

Camera P.

Distance

Lens C - Z Focal Length 75 mm

Stop F 3.5

Exposure 7 - 16 p-s. - K2 Filter

Light fair sun - clouds back

Plate C.O.

Donald R. Dickey

115-55

Monday 4-16-23 Rain-trace cloudy - High No.E. Wind

Laysan Id. Temp. 7:00 AM:- Dry 68° Wet 66° Rel. Hum. 90%

M. Temp. 78°

6:00 PM 70°

Cursed day of "grief"

Awakened at 6:30 by sudden tropical gale & spit of rain. Tent pegs held, but before I could crawl out in my shirt tail and cast the fly loose the gale caught it & ripped off the front portion. It has been my joy & delight - keeping film cool as a cucumber in temperatures ranging up to 89° No great damage but a bad start.

Black squall followed squall all day altho the total precipitation would not exceed 1/10". Cloudy between times. Schlemmer skinned out some birds while I shaved, dressed ear, developed test and cursed. These lost days are getting on my nerve.

Certainly the birds do what they can to cheer me. As I sit writing at

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my table in tent a shade & nest-hunting Red-tailed Tropic Bird is squawking the most horrible clucking squawks in my tent and under my camp chair just one foot from my foot. I just reached over & touched her glorious roseate back. On a camera box 4 feet from my nose a Laysan Finch is singing his heart out canary - fashion. He has been in the tent for over an hour, singing almost constantly. Beyond the corner of the tent fly, where it lies heaped on the ground a Bristle-thighed Curlew is picking idly at a brass grommet. So it goes - with no light to work them in.

Skeletonized a curlew today and found the pincher claws of a fair-sized land crab in his stomach. It was emaciated and depauperate - who wouldn't be?

At 4:30 a Jap sampan hove too in our cove - rugged devils, clear from Honolulu in their frail boat. Suddenly they seemed to spy our camp - jibed about and flew down wind. Probably opium runners or poachers with contraband aboard, who did not care to be investigated inside the 3-mile-limit. Both parties were equally surprised for we had not expected to see a mast before the 28th at earliest, and they had expected lea to ride out the nights rollers. A good thing, for they will spread the news the Island is watched - even if it is only once in 10 years.

Reno brought in a dessicated Laysan Rail tonight - dead not over a month.

Birds coll. today

#6 - *Sterna fuliginosa* - ♂

#7 - *Arenaria interpres* - ♂

#8 - " " - ♀

#9 - *Numenius tahitiensis* ♀

#10 - " " - ♂

Small on " " - ♂

Had the 2 pinchers and other portion of a land crab (*Ocypoda*)

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in stomach.

Tuesday 4-17=23 Showers - E. Wind - gentle - Cloudy except 2 hrs.

Laysan Id. Temp. 7:00 PM: Dry 70% Wet 70% Rel. H. 100%

M. Temp. 81° 6:00 PM 73° Misting.

Another aggravating day with humidity that frightens me - 100% tonight!

Sharp showers in night but before we got to work in the tobacco patch colony it had clouded over again and was misting spasmodically - "liquid sunshine", Hell! Waited around all morning for 1/2 hr of sun.

To kill time I set out looking for petrels as we used to on the Coronados, none having been detected to date - on the island. In 5 minutes I had 5 which I take to be *Bulweria bulweri* located in crevices in the piles of guano rock so. w. of the lagoon, in just such sites as *O. melania* would choose if it were present on the island. Took 2 for myself and 2 for the ES. Wetmore will be able to get all he wants on his return as they seem common enough in the restricted spots that are suitable for them.

Found a poor emaciated Laysan Albatross dying from lack of food due to a broken wing, so put it out of misery with a pellet of cotton & ether in throat and skeletonized it.

Had an hour or two of fair to fine sun in afternoon & should have some fair film of the Sooty-backed Tern colony, Man-o'-war birds, etc., about the tobacco patch.

The pair of *Himatione* are about the same rocks today, but so far I have not succeeded in photographing them.

The Noddies at last are showing nesting interest. Several pairs are hanging around the low broken guano rocks in the same section. As soon as one comes to know the birds there is as much difference as between day & night between Noddies and Hawaiian Terns. The former is larger, more pigeon-

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like, lighter in coloration, heavier & stumpier in bill and has a coarser lower-pitched and entirely different note.

Saw something I would not have believed possible this afternoon. A Bristle-thighed Curlew stepped into a Man-o'-war bird's nest which was left unguarded for a moment, picked up the egg in its long decurved bill, and carried it 15 feet, dropped it, broke it open and ate it! Got some film of it but had no time to set diaphragm so it may be hopelessly over exposed. At least it will be a record of fact. These cursed bandits must have accounted for every egg, save 2 or 3 that have hatched in the rock colony of 100 pairs of Hawaiian Terns that are now sitting disconsolate on old empty nests on these rocks - only 2 or 3 pathetic yng to show for the whole colony's first attempt. Now some of them are starting anew out on some lower rocks which the noddies were inspecting and where the Curlew will have an even easier chance. Only the Sooty-backs seem fairly safe from them. They nest in close-packed masses of thousands upon thousands of birds, each just pecking distance from its neighbors. A curlew in the center of that throng would be pecked and pestered out of the colony. The only danger to them would be from man or some other agency scaring off the inc. birds, for of course the outskirts of the colony would be picketed with bandits.

Killed a rabbit on way home. It ran 100 yds after we started it first & hid behind a yng gooney. Schlemmer slipped up and grabbed it. They are getting rare, but it would be hopeless to try to exterminate them. Reno is not even trying to use his 17 bales of alfalfa to poison them. Birds just use it for nests and rabbits are too scattered. But with a couple of hundred thousand holes to hide in and a readiness to become nocturnal in the face of pursuit there is small hope of getting them all. It is pathetic to see all the tiny green leaves make a last scattering try now that the

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rabbits are so reduced. Last night Reno got none. Night before 1 ♀ carrying 11 young. No wonder they peopled the island!

Birds coll. today

#11 *Diomedea immutabilis* ♂

skelcton of bird with broken wing slowly dying of
starvation which we put out of misery.

#12 - *Bulweria bulweri* ♂

#13 - *Bulweria bulweri* ♀

Eggs minute

#14 - *Sterna fuliginosa* ♀

Largest egg 5 mm.

(Also 2 *Bulweria bulweri* given Reno for B.S.

Wednesday 4-18-23 Rain at dawn sun till 11:00 cloudy light So.E. wind

Laysan Id. Temp. 12:01 AM: Dry 69° wet 69° Rel. H. 100%

M. Temp. 82° 6:PM 73° Temp. 7:00 AM Dry 70° Rel. H. 100%

Ball, excited by the *Bulweria* I brought in last night went petrel hunting with a flash light in the evening and found a pair of the birds under one of the old shacks. I went down with him and was interested in their "barking". While we had the light on them one of them began to "make up to" its side partner, and in doing so gave vent to a series of low explosive barks that would have passed as the distant welcome of a 20-year old family bull dog. Oddly enough the Christmas Id. Shearwater begins its song with just such explosive "barks" before settling into the cat like yowling that indicates its kinship with *P. cuneatus*. In other words its voice is a composite of *B. bulweri* & *P. cuneatus* just as its body size is intermediate and just as it combines the color of the petrel with the other characters of the shearwater.

But the voice of *P. cuneatus* is the one that will stick in all our minds as the oddest and constant bird note of the island. All night a dozen are yowling and moaning at once about your feet wherever you go, and even by day the low moans come up from the nether regions of the burrows or break into the wild climax that accompanies a fight. It starts as a low "moan", as everyone else has called it, that to me seems from the first more cat-like than human -- more of a potential yowl than a moan. There is a crescendo and climax even in this low conversational stuff followed often by a change of timbre, as tho the last of the wail was an inhalation. This as I say is a continuous chorus from a full 100,000 throats all night. Of these a dozen will be near enough to definitely obtrude themselves upon your consciousness until one grows accustomed to it all. In the distance where the quality is softened it keeps reminding me of the chorus from a pigeon cote. But when 2 ♂♂ (assumption) take a fancy to the same burrow or ♀ the notes rise into a pandemonium of cat-calls, screeches & yowls that no one could grow accustomed to any more than to a caterwalling party on the back fence when one wants to sleep. In fact the sound of these rough & tumble fights so exactly resembles a cat fracas as to be laughable. The ensemble emitted by a mating party of about 9 erotic cats exactly describes the racket. These rough & tumble fights are very real affairs. They occur mostly at night yet no day goes by with out my seeing at least one. They roll over & over with first one and then another on top and with bills grabbing like bull dogs at wings legs feet or necks. I can imagine serious injury sometimes resulting. It would be a scream in the movies, but tho they sometimes last for some minutes they are usually over in a few seconds and, as I say, are mostly at night or before I could set up the movie. Last night they undertook to make the one corner of my tent and evidently there was "a triangle", for every 5' it seemed they would knock off work and screech their

fool heads off. Theirs is the most versatile and ubiquitous vocalization.

The voices of terns are of course the same the world over, so I was surprised at the diversity in the 5 species here. The Gray-backs have an iterated triple cry or rasp, "kay-tee-did" run quickly together with the stress on the second highest pitched note. Sometimes it reminds me of the old high school whistle, rasped out, "T-O-E." The Black-backs I have heard only screeching in clouds of thousands, but I imagine the constant voices in the air at night are largely theirs. "T-O-E" would be better for them with the stress on the first note. They sit on their chosen nesting grounds all day, or hover screaming above it so much of their activity is doubtless at night.

The Love Terns have a gentle wheezy twittering like an over grown Cliff swallow.

The Noddy a long low pitched grating -

The Hawaiian Tern

To revert: camp is a full 1/2 mile from the big Sooty-backed Tern colony No. e. of the Lagoon. That is none to far. Night and day even here the rasp is noticeable, but distance makes it seem more like a frog chorus in the distance. It interests me to see how constant it is. When undisturbed by man the thousands upon thousands suffice to insure that at least part of the colony will be in an uproar, and the Babel (babble?) rises and falls but little and is never still.

The albatrosses in general are silent birds, but in their "dance" they emit a like "whee", more like a shorebird note than such a great bird's call. Also they have the stifled "trumpet" or "moos" as someone calls it, at the end of the dance when the head is raised. It always sounds as tho the position stifled it - it is so muffled. Only the Black-feet, when they get to lashing their heads sideways in the ecstasy of their dance put any animation into the calls.

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Then their "whee" grows to an excited crescendo climax that satisfies the listener the birds heart is in it. Most of the Laysan dances I have seen are stodgy affairs of curtsying & bill snapping. The Black-feet are better all around, throwing out both wings instead of tucking the head under one and putting more pep into it.

The harshest note of the island is the terrible screeching cackle of the Tropic Bird.

The Sulas I imagine are purely diurnal, as the immature birds I spoke of before always come home at sun down to perch in the cocconut trees and peer down stupidly at the light of our flash lights. Diomedea seems stupid at night and generally both parents will be found lying near their youngster with the head under the feathers of the back. The Man-o'-war birds seem also to come home to roost at night, the foot-high stumps of dead tobacco plants on the west side of the lagoon being black with them at dawn.

Found a Bristle-thighed Curlew dead today in the tobacco patch where we spent the day - mostly waiting for sun. Too far gone to save, so skeletonized it. Hardened drops of egg yolk from her last breakfast clinging to her neck feathers.

As I walked along the edge of the Sooty-backed Tern colony a dead Gray-back caught my eye. As I picked it up it gave a few gasps but it was so completely all in that I put it out of its final agony. Skinned it myself instead of trusting it to Schlemmer, whom I'm trying to teach to skin, and found it had died in oviposition, an egg being lodged at the orifice of the oviduct. Doubtless she had been in labor all day if not longer. Stomach entirely empty and general appearance of viscera suggested that she might have gone without food for two or three days. There are a dozen pairs or so that have sought the shelter of the great Sooty-back colony. Unfortunately they are on the outskirts so still subject to the attacks of the

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curlew.

The last solitary youngster was gone from the Hawaiian Tern colony this morning. The whole effort of this colony of a hundred pairs or so has been fruitless. Fregata probably got this juv.

In all there are about 25 Love Terns scattered thru these broken guano rocks - 40 or so at the So. end of the island - 15 or 20 about camp - in all fully 100 birds on the island.

Another beastly day of waiting for sun but made memorable by a bit of luck before lunch that I will never forget. I saw finches (T. cantans) hop on a certain rock twice in quick succession yesterday so guessed it was a regular vantage point. Set up the camera and soon had a Laysan Finch recorded on the film (if all goes well and this cursed 100 % humidity does not wreck me.) As I finished I heard a weak but charming song behind me and whirled to find one of our pair of Laysan Honey Eaters singing his heart out for me. Whirled the camera, slammed the focus lever, cranked & think I have him. And before I had recorded the footage & "shot" Schlemmer came up holding a Laysan Rail in his hand. To get all the footage possible we turned him loose in front of the high speed. Meantime I had held alive & unhurt in my hand one of the two Laysan Rails we know are left on the island, noted his red iris and green (basally) bill and depauperate wings, developed plumage. To think of getting one of the 3 Honeyeaters we know to be alive and one of the 2 Rails and one of the Finches in lightning succession was indeed luck. To compensate a lever on the high speed broke that is irreparable in the field. I can get by, but it will add difficulties to the already grilling it is game for the rest of the trip.

Netmore thought perhaps this egg - robbing debauchery was to get water, but an experiment today would seem to argue against such a hypothesis. I

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found a pecked tern's egg (Slunata) that could not hatch so used it in an experiment.

Put it on top of the finchs' rock and soon one had it drilled throwing the shell chips to right & left. I then took the egg away from him, broke it and poured the water "white" in the same depression the egg had rested in.

Instantly the Finch returned, looked sadly disappointed and hopped away.

I then put the yolk in a nearby depression and when I left there were three birds fighting for that like English Sparrows in the gutter. They are simply after the protein & fat food of the yolk, to my mind, & not after a substitute for water. Much as they would doubtless like it if a satisfactory substitute for water were easily procurable in this waste it does not appear to me that eggs furnish that substitute.

Sunday 4-22-23 Shower in night - calm - clear perfect day

Laysan Id. Gentle E. Breeze - Temp 7:00 AM: Dry 70° - Wet 68°

Rel. Hum. 90° - Noon 85° (dry) - 2 PM: 80°-73°-72%

6 P.M. 75° - 71° R.H.

Midnight 69° - 69° R.H. 100% mist - calmest moment of trip air south-east

Everything comes to him who waits, even tho he wait as ungraciously as I have through the last profane ten days.

Awoke to a calm bright morning - the first of the trip - and except for a dark cloud that formed & whirled in one spot over the island for 2 or 3 hrs. it remained fine all day. Almost incredible!

Up and at it early, packing Parvo. High speed and graflex over to the "marsh".

Birds collected today:

#26 - Bull plover ♂ imm.

Extreme of immature plumages represented on Island. Evidently not breeding, but merely returning to Island to roost. Testes undeveloped.

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Birds coll. today:

#15 - Numenius tahitiensis - ♀

Found dead in tern colony so.w. of lagoon - breast smeared with
egg yolk from his bandit feasts.

#16 - Sterna lunata

Found dying condition in tobacco patch tern colony, with egg in
oviduct lodged at orifice. First case of death in laying that
I have come to my attention. Egg saved - #19

Thursday, 4-19-23 Not written
Temp. 11 AM 80, 6:75, calm so. wind

Friday, 4-20th Noon dry 82 7:73°, so. w. veering to No. e. 77°

Sat. Laysan A. 6:00 71°, 2 Noddies, 1 Plover; 8 PM 68-68°, 100%

#17 Noddy L.448 - ♂
#18 " L.433 - ♀
#19 Laysan Abl. ♂
#20 Golden Plover

Surf rolling high tonight

Sat. 4-21 Cloudy, dry 70M 76-6, 70; highest surf

Sex diff in Sula pis. and Tropic B. - nest living (skids) both Shears
yng. Frigate.

#21 Haw. Tern Ext. 705 ♂
#22 " " " ♂
#23 Sula pis. Ext. 1495 L735 ♀
#24 Diomedea nig. albino ♂ Ext. 2180 L825
#25 Curlew ♀

Tragedy of Tern colonies all over ^{id.} Brown gooneys no white - Sula pis.
sex dif.

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Contained large partially digested flying-fish.

#27 - *Sula piscator* ♀ imm.

One of 3 Or 4 birds nearer mature plumage than #26, but still not breeding. Possibly 3 yrs. to full maturity. Ovaries undeveloped. No pectoral band. Contained large partially digested flying-fish.

Monday 4-23-23 Rain & mist - driving N. gale - clearing to sandstorm in aft.

Laysan Id. Hell of a day

Temperature:

7:00 AM: Dry 67° Wet 67° R.H. 100%

M.: 68° " 68° " 100%

6:00 PM: 67° " 65° "

"And now I must pay for my fun!"

Awoke to the slatting? tune of the tent straining at every peg before a driving North wind and soaking mist. All my preparations for a big photographic day-preparations over which I worked till 12:30 this morning went for naught. Cursed the Sahara of Laysan and decided to declare it Sunday.

About 10:00 the driving mist let up so we (Reno, Schlemmer & I) decided to walk around the lagoon.

Saw 15 Laysan Teal all in sight at one time, and Ball afterward reported 18 when he passed them earlier - they are paired off now, but congregate at some small holes No.E. of the lagoon which seem to hold the rain water in less brackish form than elsewhere.

The Finches are common about these same holes. The ♂♂ are wearing into the full yellow plumage and the boys have reported seeing them carrying nesting material into crannies in the guano rocks.

Checked up carefully on 109 *Diomedea nigripes* on our way around the

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island. One had considerable white on crissum with faint indication of light feathers on rump, but no suggestion of a true rump patch. Another had scattered light feathers on crissum - none on rump. All the rest were unicolor posteriorly. I am at a loss to account for the birds I saw on ship board with the full white rumps. I had assumed that they were simply in the plumage of full maturity, and that those with less white were grading down in age - or at least in degree of high plumage - to the unicolor (in rump & crissum) immatures. Yet here I am on one of their great breeding grounds and yet I can find no single individual with a real rump patch, and 98 to 99 ex 100 exhibit no tendency, even, to white on either crissum and (even less) rump.

Ball has an ornithological find to his credit today. A pair of *Sula leucogasters* are nesting on the ground among the rocks No.e. of the lagoon. This neatly vindicates my first sight record for the island. (cf. 4-11-23)

So. E. of the lagoon there is a glorious Man-o'-war bird colony that should be filmed, but time slips by under the curse of days wasted by wind and cloud, gale & mist, until I despair of covering half that should be done. With even 50% of working weather I could have made a clean-up, but except for yesterday it is rare to get an hour of working weather a day & day after day has been an utter blank like today - in fact a blankety-blank! For when we got over E. of the lagoon it came on to rain - driving horizontally in a fine spray that soon soaked us to the skin & chilled us to the bone despite the fact the thermometer showed 68° at M. when we got to camp.

So. E. of the lagoon is one small (6' x 8' x 10') wind sculptured phosphate rock in which an interesting colony was nesting. Just a glance with rain-blinded eyes and several pairs of *Bulweria*, 1 *Phaethon*, 2 *Cygus*, several *Puffinus* around the base and a-top the whole, spying for eggs, a

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Numenius.

Picked up a Golden Plover for a skeleton. It was dying probably of the alkaline or saline poisoning that affects this sp. particularly of the various shorebirds here, and had already keeled over on its side, too weak to face the wind when I picked it up. Died almost instantly - the fright being apparently the last straw - more emaciated than I believed anything could be and live.

This afternoon the clouds broke at times, but the gale increased until the whole island seemed to be walking - a regular cursed sandstorm of the worst sort. Thank heaven for my floored and almost air tight tent. The rest have an eighth of an inch of fine dust & grit over everything. Outside every trail is obliterated - the sand is crawling in new-made ripples - every Puffinus' hole is filled or filling - the poor seeds that had sprouted bravely after the rabbits were thinned down are being blown out of the ground - or the ground blown away from them - off the So. end of the island flaps a regular/sand "banner" - life is Hell!

At 4:00 a sampan appeared off to the E. of the island rushing along under full sail, passed So. of us & made off W.S.W.

This afternoon Schlemmer picked up a bottle dropped from the U.S. A(rmy) T(ransport) "Logan" in Lat. Long. on requesting finder to return same with report to U.S. Hydrographic office.

The old wrecked Sampan on the N. shore was No. 20, Honolulu listing, as evidenced by one of the battered blue boards. Such are the data one must piece together to write the story of the sea - to deal with it and the islands, is the way I feel tonight.

Tried scrambled Man-o'-war bird egg tonight. It was doubtless nourishing, but I did not relish my share.

A gentle pair of Bulweria have taken to spending the nights in the

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Kitchen arriving, according to George at dark the last 3 nights & leaving about 5:00 A.M.

Birds coll. Today

#28- Charadrius d. fulvus (Gmelin) ♀

Skeleton or bird found dying, probably of saline poisoning as Wetmore suggests too weak to move. Emaciated beyond belief.

Charadrius seem much the most subject to this wasting poison. Dead birds all over Island. Curlew next & turnstones least afflicted of the 3 common sps. of shore birds.

Tuesday 4-24-23 Cloudy-north gale - sand storm Hell of a day

Laysan Id.

Temperature:

7:00 65° 61° R.H.

M. 69° 59°

3:00 65° 61°

The gale and blinding sand storm continues unabated and life in the open or in the tents or tumble-down shacks is equally unbearable. Not much sleep for anyone, but luckily my tent has held so far, by turning the fly loose. The other boys were up off and on replacing pulled pegs. Life is plain hell, with grit in food, eyes and everything. I hate to think of the outfit repairs that will be necessary.

Everyone except smiling George, the cook is on edge. Took Eric and plowed out into the stinging blast of sand to observe conditions with the birds. There is not a shearwater burrow entrance visible on the higher sand ridges and the island seems almost deserted of birds. A Man-o'-war colony that had a dozen eggs yesterday and another dozen mated couples is deserted except for one ♂ & one ♀ that are sticking to their eggs. The rest have given it

up and taken to the air leaving a feast for the curlew.

The yng. albatrosses are facing it out alone with heads low & out ahead of them into the wind instead of under the wing or down of the back as they generally sleep away the days. Their eyes are running with tears and in each corner is a pellet of sand accumulation. Rescued 3 or 4 that had backed into the mouths of shearwater holes and literally been buried alive. One whose head & neck alone showed was almost too weak to sit up and face the wind when I rescued him.

All the shearwaters that sit around by thousands above ground have taken to the sea except an occasional bird or pair that squat blinking the nictitating membrane in an effort to throw out the sand from their eyes.

Collected a pair of *Sula cyanops* and found the ♂ was the bird that was incubating perhaps indicating that the ♀ do the incubating by day. Reno took a bird that further bore this out, but of course full data of many cases would be necessary to eliminate coincidence. They make no pretense of a nest but lay the eggs (2 in all but 3 or 4 cases out of 40 or 50 nests examined) on bare sand in the center of a circle which they keep brushed free from loose sand by rotating about on the axis of the eggs. A few of the yng are two weeks old, many just hatching and perhaps 1/2 still have eggs. Irides bright yellow.

Went over to the big marsh N.E. of the lagoon after lunch to see how our cache of tripods etc. had weathered the storm, but found the cache buried in sand and did not dare remove covering to examine damage in this gale.

No sign of the Teal today.

Laysan Albatrosses have gathered from all parts of the island to the marsh, where sand does not blow in their eyes.

The pair of *Sula leucogaster* Ball found is incubating 2 eggs on a nest of dry *Sesuvium* stems on the ground on the edge of a scattered colony of *S. cyanops*. In every way they resemble *S. cyanops* with a black stocking pulled over head and neck. Feet greenish. Irides. The nest was on the ground in just such a situation as *S. cyanops* but differs from latter's in being built into at least a semblance of a platform. Apparently just this one pair on the island.

Took 4 Man-o'-war birds from a colony among the rocks. They seemed loath to take to the air from their sheltered nook and allowed us to pick them off the nest. Took a ♂, ♀ & imm. ♀ in the white-headed, brown throated plumage of imm. Also took another ♀ for a skeleton.

Picked up an injured *Sterna lunata* and will make a skin of it.

Schlemmer sneaked up on a curlew asleep in shelter of a rock & picked him up in his hands. In fact all birds collected today have been picked up with only a bare or at most gloved hand for weapon, and then etherized.

No signs of storm's abating ; this evening - cannot see 1/2 m. in any direction on the island.

Birds coll. today: -

#29 - *Puffinus cuneatus* ♀

Skeleton of bird buried and killed by sand storm. Largest egg 4 mm.

#30 - *Sula cyanops* ♀

L. 885 Ext. 1765

#31 - *Sula cyanops* ♂

L. 890 Ext. 1750

#32 - *Sula cyanops* ♂

L. 895 Ext. 2245

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Aberrant in respect to crissum & rump, having the maximum amount of white on those parts of all birds so far noted on the island except for the albinistic specimen #24.

#33-Puffinus nativitatis ♂

Skeleton of bird buried and killed by sand storm & burrow cave in. Parent of set #26.

#34 - Fregata aquila ♀

Skeleton

#35 - Fregata aquila ♂

L. 935 Ext. 2080

Incubating - parent of set #27

#36 - Fregata aquila ♀

L. 985 Ext. 2145

Incubating - parent of set #28

#37 - Fregata aquila ♀ im.

L. 920 Ext. 2075 (1 yr. old)

#38 - Sterna lunata ♀

Nesting

#39 - Numenius tahitiensis ♂

Wednesday 4-25-23 Broken clouds - N.E. gale - sand storm (third day) hell on earth.

Temperatures: 7:00 AM 64° - M. 67° - 6:00 PM 64°

The terrific cold gale and sand storm continues unabated - almost unbearable - getting on our nerves - third day however, wind a trifle E. or N. and scudding clouds broken with moments of sun, so we pray to heaven it may go down with the sun tonight. Outside sand cuts face like a knife. Am keeping the tent sealed tight but even so there is grit in everything. I hate to think of

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the condition the movie gears will be in!

Huddled in a corner of the shacks & finished skinning the birds collected yesterday.

Got out for half hour after lunch to collect few more birds.

No sign of let-up tonight but sharp rain squalls are laying the sand

Birds collected today

#40 - *Charadrius d. fulvus* ♂

Found dead - too weak to survive sand storm that is raging. Many are dying.

#41 - *Sula cyanops* ♀

Skeleton

#42 - *Diomedea immutabilis* ♀

Ext. 2130 L. 750

#43 - *Diomedea nigripes* ♂

Skeleton

Thursday 4-26-23

N. gale unabated - rain squalls - less sand blowing - hell continued

Laysan Id. temperatures:

7:00 AM 66°

M. 69°

6:00 PM 67°

Fourth day & night show no abatement of the N. gale and driving sand storm. I have had many camps but none so continuously unpleasant as this for two weeks. Nor does the fact that it is my one chance at these islands and that the storms have cost me at least \$50 a day in dead loss for two weeks add to my misery. However, the tent has held, God knows how, & we have had the shelter of the old shacks so we could prepare hot food and eat in

4-26-23

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comfort. All in a lifetime.

Wind more puffy tonight - clouds more broken and wind a few points E. of N.

Birds coll. today

#44 - *Telespiza cantans* ♂ ad.

#45 - *Telespiza cantans* ♂

#46 - *Gygis alba kittlitzii* ♀

Bill: base blue - terminal black - Irides black - Tarsi & Toes blue-gray-Webs buff.

#47 - *Numenius tahitiensis* ♂

#48 - *Charadrius d. fulvus* ♀

Friday 4-27-23

High N.E. Wind - broken clouds - gale abating - heavy rain at 9: PM

Laysan Island temperatures: 7 AM 69° - N. 76° - 6:PM 70°

Still blowing but tomorrow or next day the ship is supposed to come, so we tackled it anyway, going over to the big marsh N.E. of the lagoon again.

Saw curlew tackle a few Gray-backed Terns nesting among the rocks kept pestering till it got a bird off its egg. Then despite the defense of 4 terns it proceeded to eat the egg, showing that they simply haven't punch enough to bother a curlew. They drove at him to the best of their ability and one even seized it by the skin or feathers of the neck and bodily yank him away from the egg, but he simply turned back to his repast. It was so crude and the terns defense so pathetically futile that Eric seized a rock and killed him at his feast. The terns hate and fear the curlew and even go far out of their way to try and drive them off, but the cursed little turnstones and to a lesser degree Plover peck and spy right among the terns without

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arousing their suspicions - yet they are quicker even than curlew in their deviltry if there is a chance to sneak in and whack an egg open. They work their deviltry by slyness - curlew by straight bluff and pugnacity.

The Sooty-backed Terns have finally settled on the N.E. corner of the Sesuvium patch and have at last begun to lay. There are perhaps 20 eggs out of the thousands of pairs.

By working with extreme caution we got up within close striking range of the Laysan Teal. 14 were in sight at once - all of them in pairs but keeping in a loose flock squatting in the Sesuvium weathering out the wind with heads tucked under their back feathers. When 2 pairs walked past each other the ♂♂ jumped at each other with the most ludicrous show of threat.

Saw Plover actually tapping egg again.

Vile day to have to work but we got something done in spite of wind, blowing sand and broken clouds:

Saw my first specimen on the island of *D. nigripes* with the full white rump and crissum such as I saw from the ship, so assume it is merely a phase proposition which chances to be rarer on Laysan than elsewhere, to judge by the relative abundance of the bicolor type seen at sea. Or it may be a matter of extreme age, but certainly not a matter of mere maturity as stated in Bailey, & . . . , no doubt, in Ridgeway.

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Movie

Neg. No. P 26

Date 4-27-23

Subject Sula leucogaster

Laysan Teal

Camera P.

Lens C-2 Focal Length 50 MM and 200

Stop F 11

Exposure 7 - 16 p-s

Light Fair sun

Time 11:30 A.M.

Plate C.O.

170-170

Saturday 4-28-23 Heavy rain at 1:00 AM, 8:00, & 4:00 PM

Clear 9 to 4 - fine clouds - east wind

Laysan Id. Temperatures:

7:00 AM 69°

M. 78°

6:00 PM 69°

At last the wind dropped after the worst wind siege I have ever experienced, but only to veer to the E. and bring up the first prolonged torrential downpour we have had. The first came at 9:30 last night, but the heaviest downpour came between 12 & 1:00 AM. When I finally finished re-winding & loading plates and turned in it was still pouring. Another heavy rain at 6:00 AM. We could have caught a cistern full of water had we had a cistern instead of pans & pots & coal oil cans.

By 9:00 it had cleared ~~partly~~ with the second collection of decent clouds for photography we have had on the island.

Rushed post haste for the Big March and found the cameras and tripods

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which we had cached there last night had weathered the deluge in their tent made of my bed cover & a tarpaulin. It is some island. Last night I hesitated to carry the cameras in because of the dust and grit that was blowing - this morning the sand is packed hard and all the lowlands flooded.

P. cuneatus seemed to entirely disappear from the island during the blow save for a few scattered groups huddled above ground in sheltered nooks. However, they appeared from nowhere & within half an hour after the sun burst through they were busy excavating the burrows which have been completely filled and all trace of them lost for nearly a week. In digging they use the bill as a pick to some extent, at least when they are starting a burrow & are . . . above ground where they can be easily observed. In the loose sand of the high ground the pick work is not as important as the shovel excavation. The latter they do by lying first on one side for a time & then on the other and driving the dirt out behind him in rapid jets that fly 2 or 3 feet in the air when they are working rapidly.

The poor Sooty-backed Terns were flooded out from their big colony and have abandoned it to the last tern for a new station where the thousands upon thousands of birds have again gathered in a compact colony. The new site is still in, or on, rather, the carpet of *Sesuvium*, but on a trifle higher ground to the south.

Big marsh is at last a name that fits the place we have been working - or trying to - since before the storm began. The water table was only a foot or so below the surface even when we came, being held there apparently by an underlying strata of coral or phosphate. Until last night only tiny holes a foot or yard across were all that gave access to the fresh (?)

water which, brackish as it was, was all the birds had. Today, however, the drainage from the deluge has set the whole country afloat.

4-26-23

The little water holes are sizeable duck ponds and there is 2 or 3 inches of standing water between them.

The Teal are new ducks! From the dumpy things of the last week weathering out the wind & drought with heads under their ruffled back feathers. Today they are real little ducks, perked up no end, and waddling about from tiny pond to pond with a contented proprietary air. The rain was worth it for their sake alone, for the terns will soon have a new crop of eggs. Luckily laying had just commenced, altho there were more eggs than I thought last night in my hasty survey. Today we saw the remnants of 50 or more, but early as we were the curlew had not left one whole egg.

Wandering Tattlers, too, are more common than I have seen them. Perhaps that is simply because I have not worked the beach much. At all events they have swarmed into this fresh water this morning. Turnstones, too, are running about each little fresh lagoon and the healthy new-plumaged Plover are also plentiful in the flooded area. One thing I can say for the Plover. It has only been the skeletized wan birds marked for death by the salinity of the waters, if that it be, without even strength to begin the spring moult, that I have seen robbing nests. Whether this diet is causative or merely a last resort of their weakened condition I know not, but chances are all in favor of its being merely a chance accompaniment, for certainly the curlew all rob nests - some collected in the act have been disgustingly fat - some thin to the point of sickness. All the turnstones seem fat as butter all certainly thousands of them have the egg habit. Think I got good film of the teal and shorebirds.

Hurried back to the camera after lunch and packed the Parvo and tripod etc. down to the beach at the so - e end of the island. This is site of the main Man-o'-war bird rookery, on a low rock escarpment, but they were shy so we quickly turned attention to the "brown gooneys" (*D. nigripes*).

The Tattler I have not seen touch an egg, as I remember it, tho some acted in an extremely suspicious way, prying about the Hawaiian Tern colony when we were making pictures at the so. end of the island.

Think I got some fine dances unless I wrecked myself by trying to get world beaten shots with clouds back & . . . possibly underexposing with "K2" filter on Orthonon stock. Their dances delight me more & more. By contrast they are as a short-necked swan ~~cake-walker~~ the Laysan bird a mere half-hearted gull-like bobber.

Dill or someone has suggested that the reason they nest on the crest of the weather beach is because "possibly the Laysan bird took & held the more favorable lagoon-shore & west ridge-nesting sites". It amuses me to think of what nigrises would do to immutabilis if competition were really keen. The latter would, I imagine, go by the board in short order. A saner explanation, it strikes me, is that the sturdier bird chose the windward ridge where a clean-cut run allows it to "take off" easily up--wind while the weakling took shelter despite the added difficulty in rising from the level inland surfaces.

Now, at last, I had nigrises in sufficient quantity to wind up the matter of the white-marked birds. I had seen so little indication of white rump & crissum elsewhere that I came to think them absent from the island, but they were there today in all degrees up to a light brown bird that is the extreme in whiteness of all seen. The size of this extreme individual and one or two others that approached it may indicate an average sex difference in this matter. Those exhibiting the white gave a general impression of extreme & grizzled age, but this may be a mere chance similarity to men & dogs that grow hoary with years, since this phase exhibits an increase of the light face ring & general grizzled body tone.

~~Tropic bird - camera back out-o'-war birds and egg under bench, beaching - dead carcasses - rubber said 200 - now sand covered - gaps for fish toils:~~

~~At 4:00 terrific rain - packed in 75 lbs.~~

~~Threatening bank & heavy showers in eve. - fine swim.~~

10 Tropicbird & egg under bench - camera pack Man-o-w Bds - poaching -
dead carcasses - sailor said 200 - now sand covered - Japs for fish trolls?

At 4:00 terrific rain - packed in 75 lbs.

Threatening banks and heavy showers in eve.

Fine swim

Mullet for supper - net - wont bite

Mortality due to storm - 2 gooneys - several Bluefaced Boobs. Most
of the Man of war bds eggs. All of one col. of S.bk Terns - tobacco patch
doing well.

Xmas Id. shears. (wind

Wedge tails - minor - 3 found

Nothing else noted